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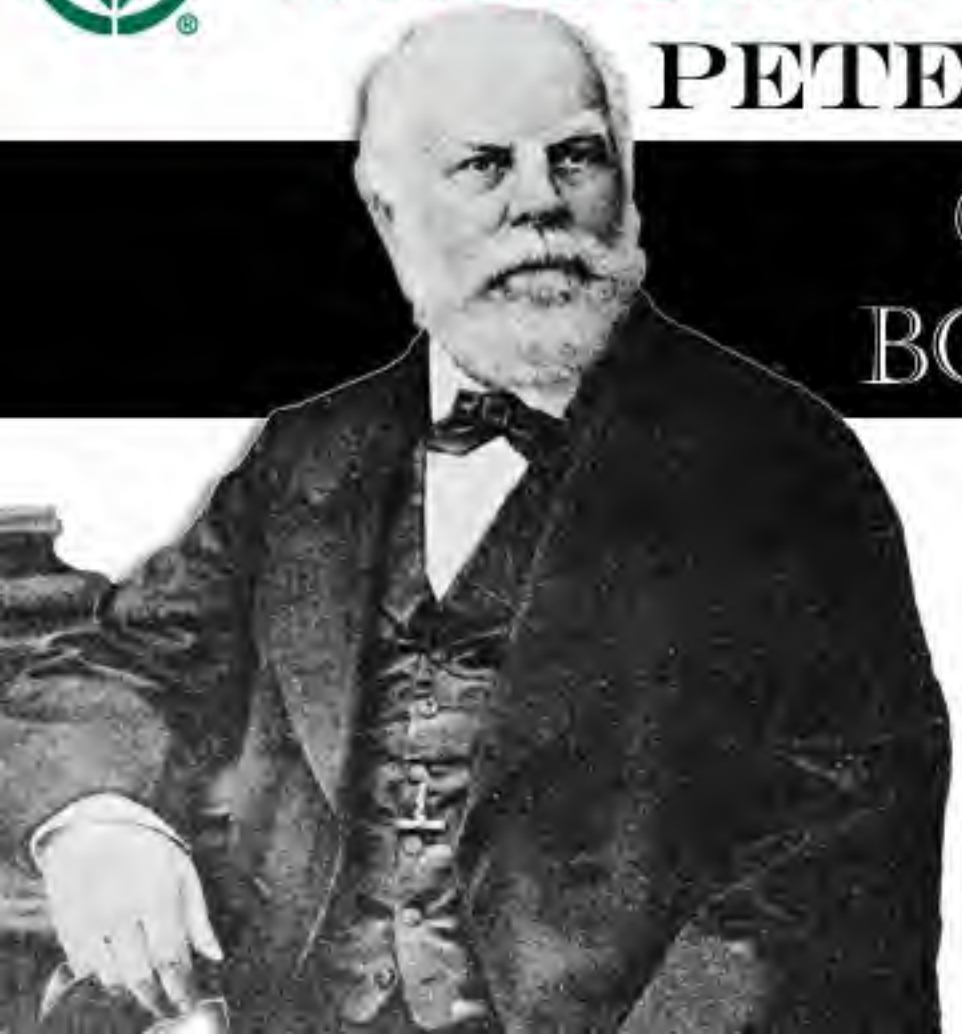
George Engelmann Botanical Notebooks



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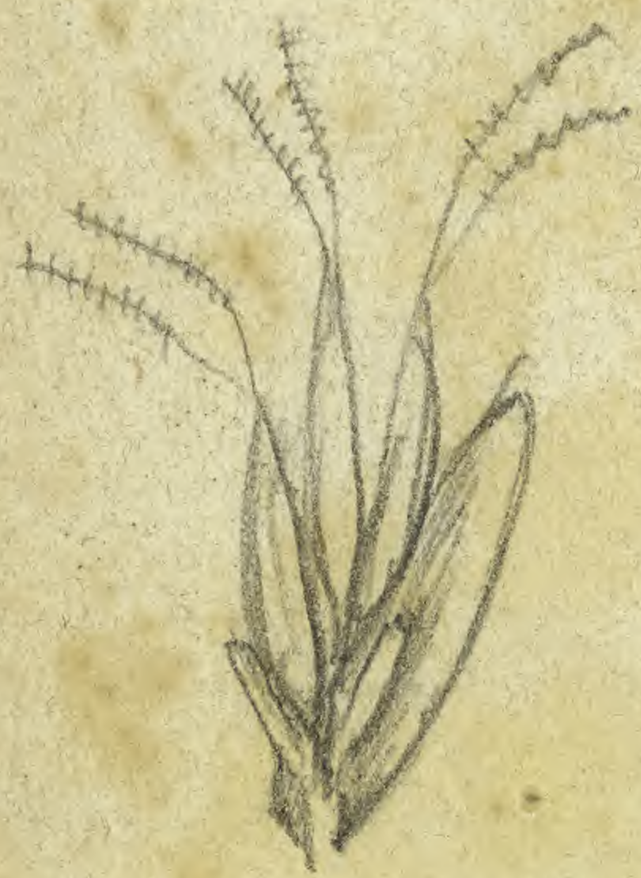
1844



Triton

Spikelet of 3 female rolls, both valves
convolut inner valve biaminate;
at base of lowest flower 2 hyaline
scaffolds (stipules?) — below them
1 ealy × Palea (?)

~~twiblet~~
male flow. similar. 3 anther

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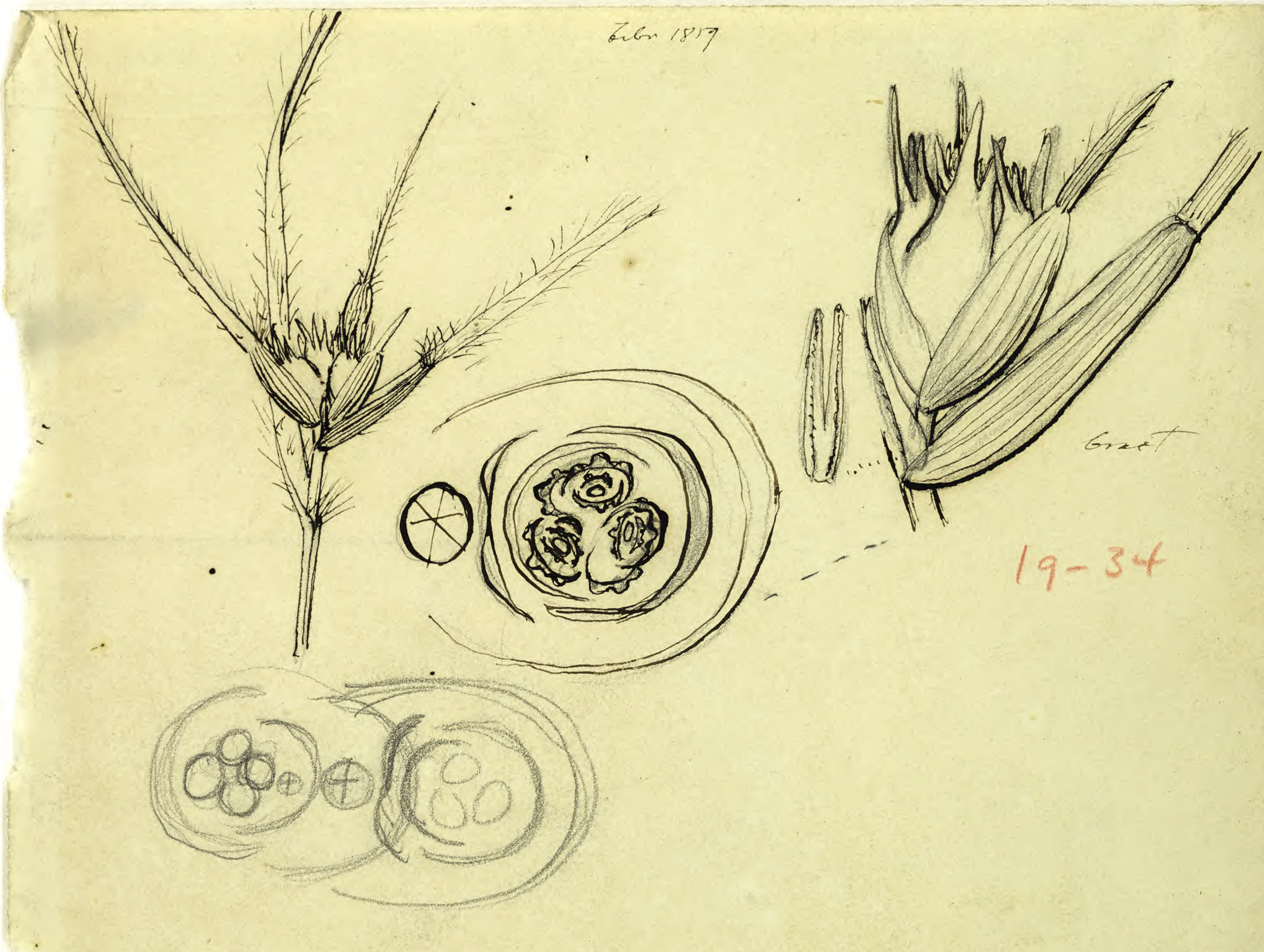
Zuber 1819



Gaert

19-34

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XV, 18

inner palea of another similar sterile floret.

rest.

Exterior sterile floret ?

outer palea (?) keeflike, with vagina & blade and ligule at x ; interior palea membranous, ~~reflexed~~, revolute, or flattish (x) nearly reduced or wanting

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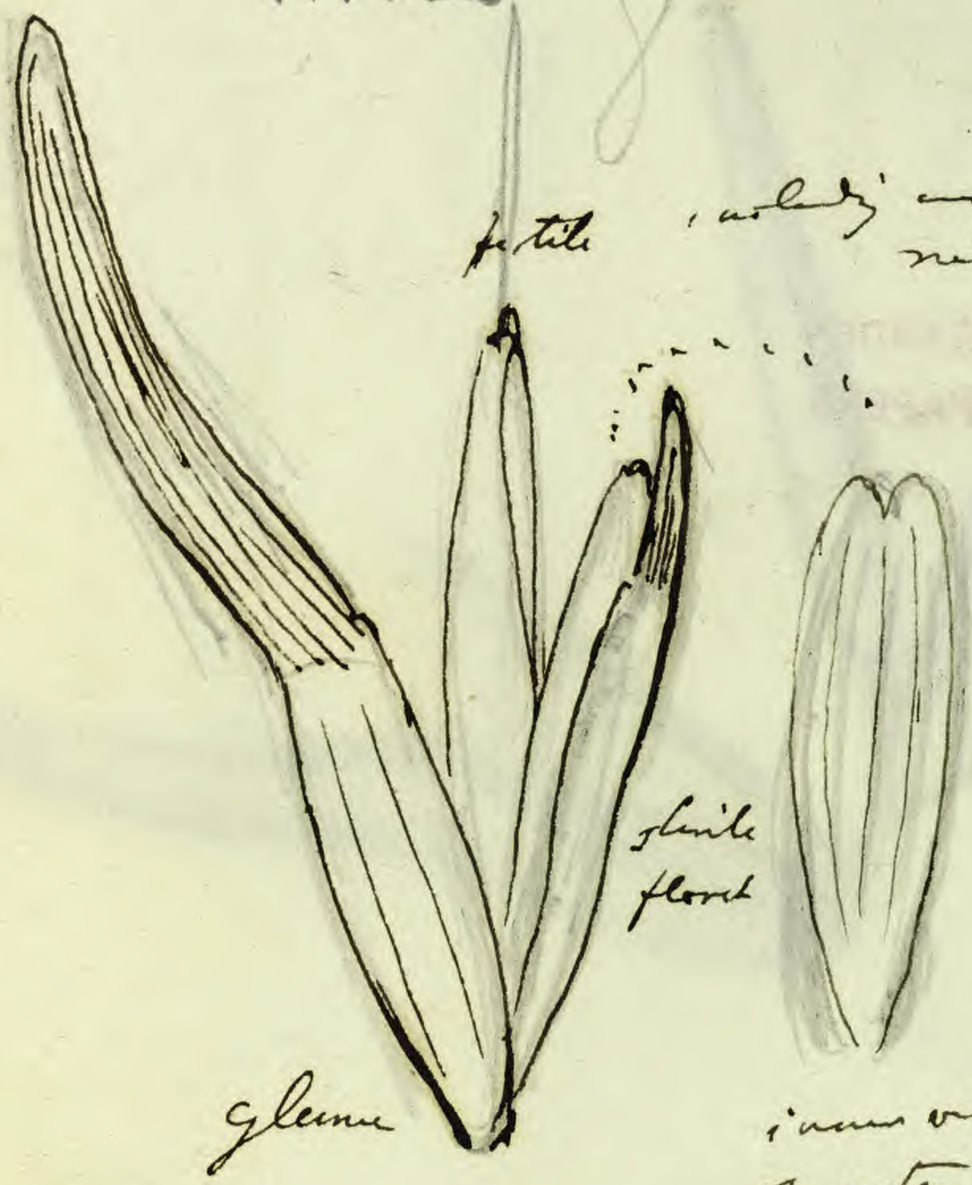

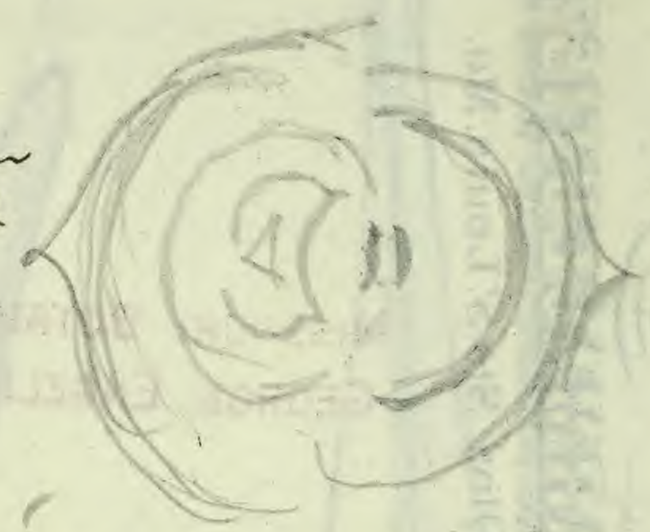

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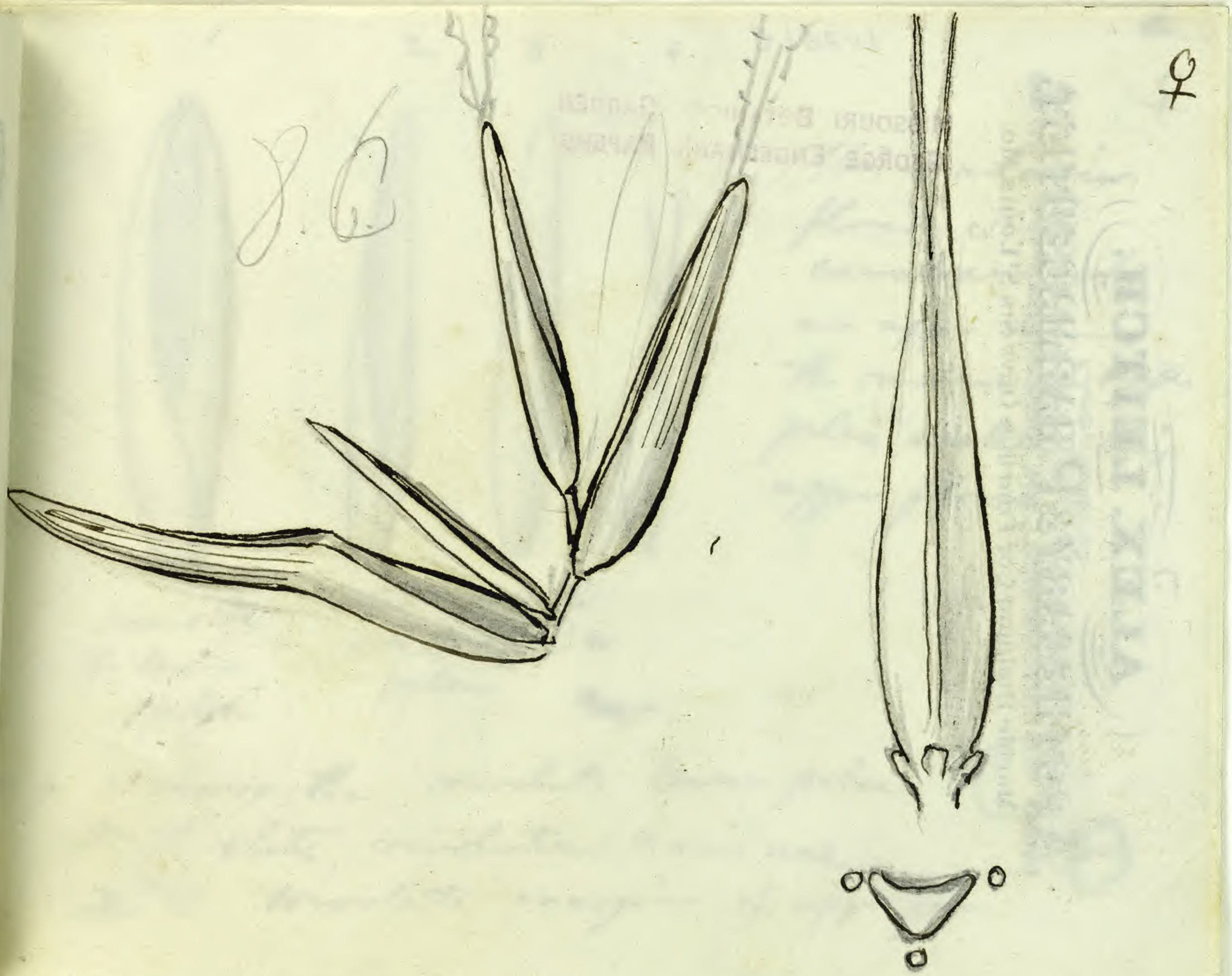

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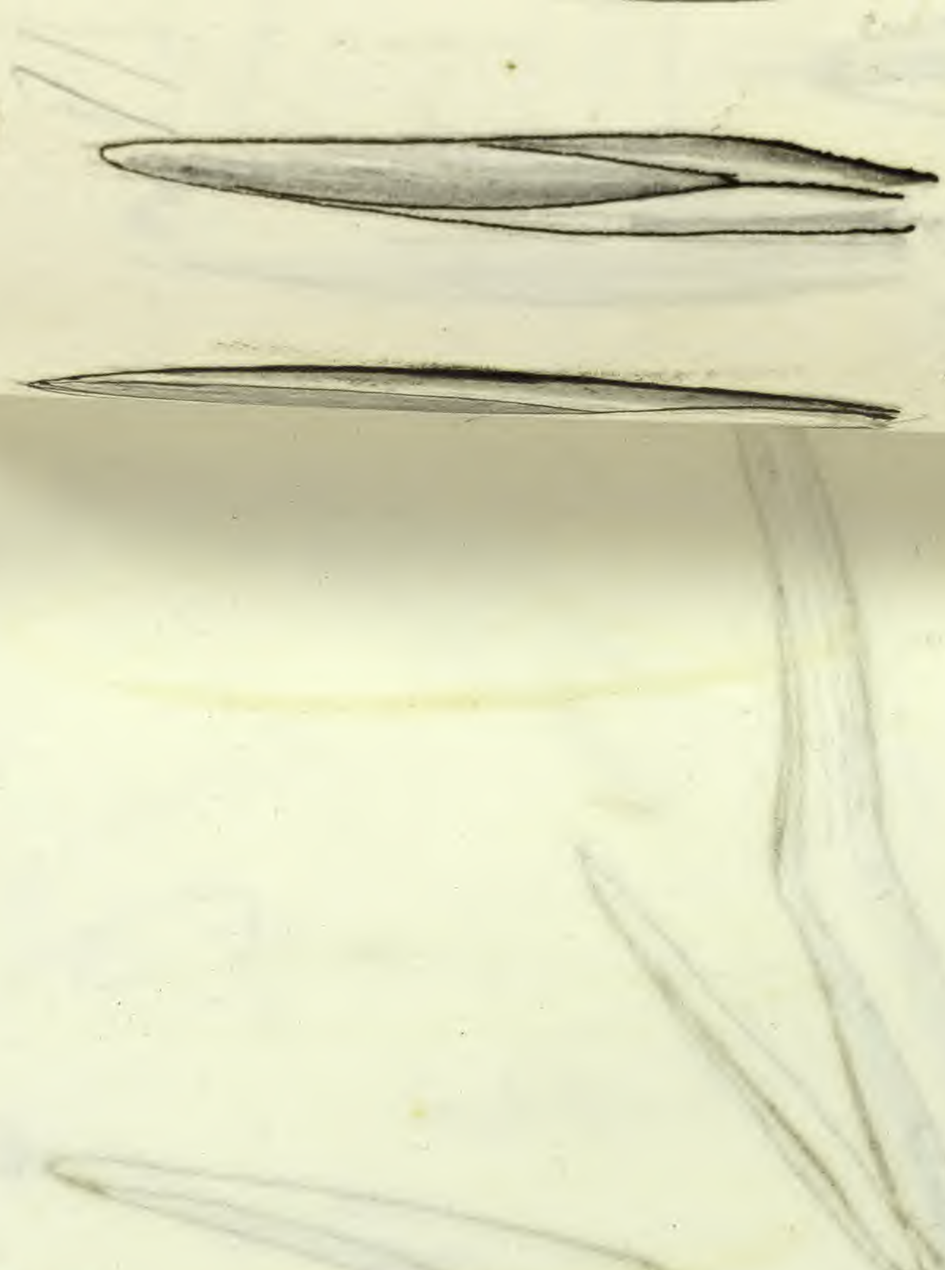

2

outer

side of

Calen

the

alate

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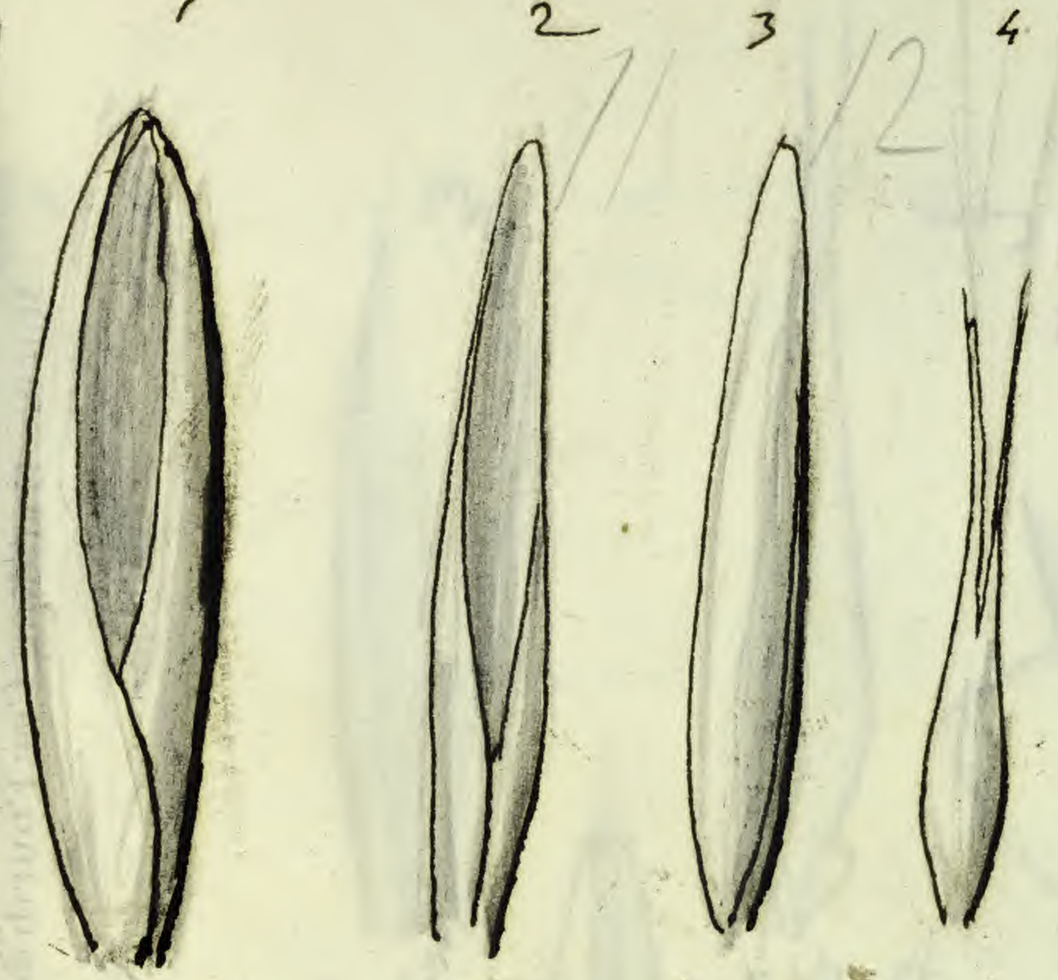

Here is a lower flower which envelopes yet an upper one the carina of upper palea (2) incloses this upper floret.

Fig 1 shows the convolute lower palea
2 the alate, involute carinal
3 the convolute margins of upper palea

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APOTHECARIES' HALL
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outside of outer paler

outside of inner paler

back or outside of inner paler showing the carinae

side of inner paler towards back of outer paler

ovary after flowering

Scales fleshy

ext. paler upwards greenish many nerved (9–11) below which coriaceous unnerved. — margin membranous, lip obtuse scarcely inter paler 2 alate — carinate

270 tim28

14 15 16

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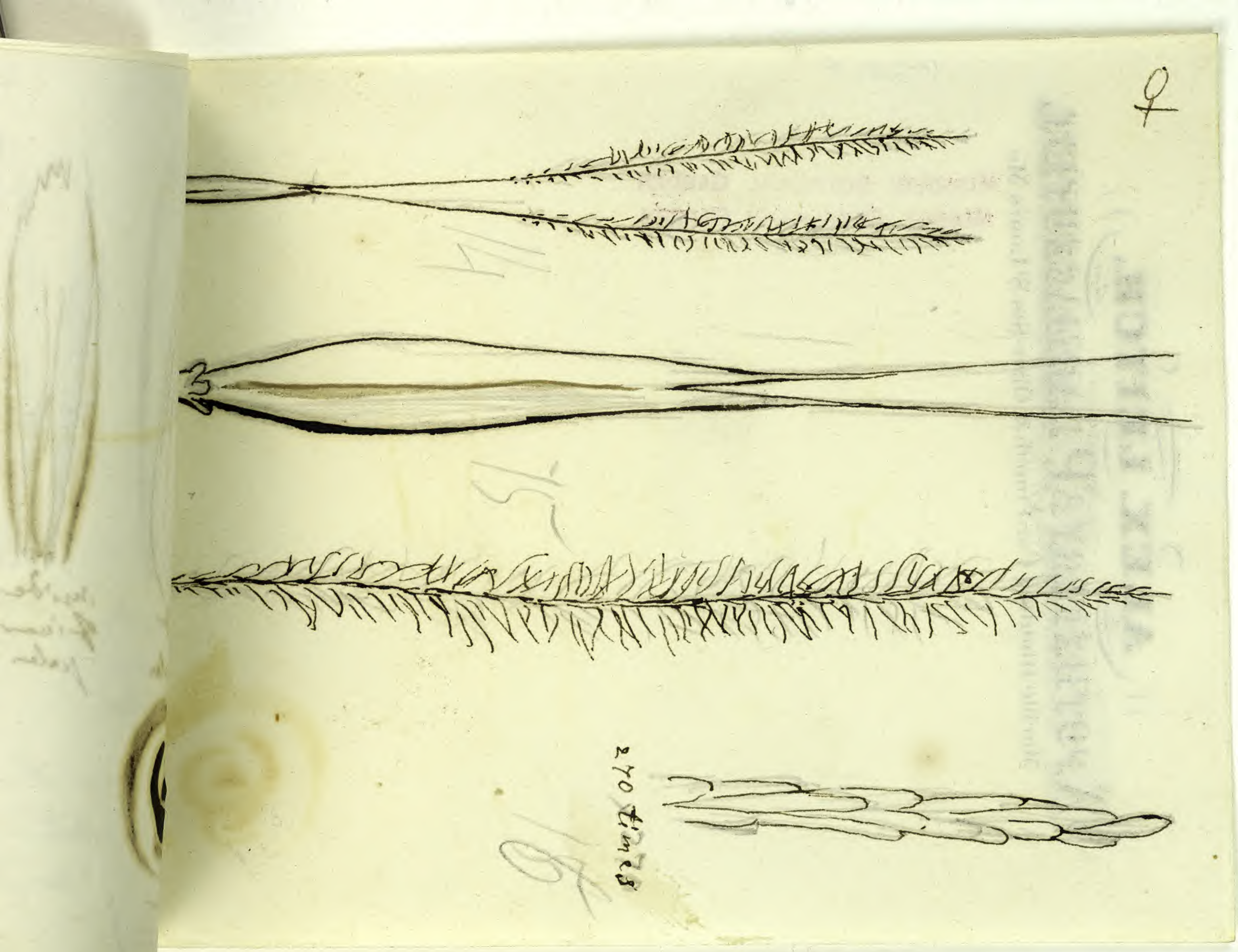

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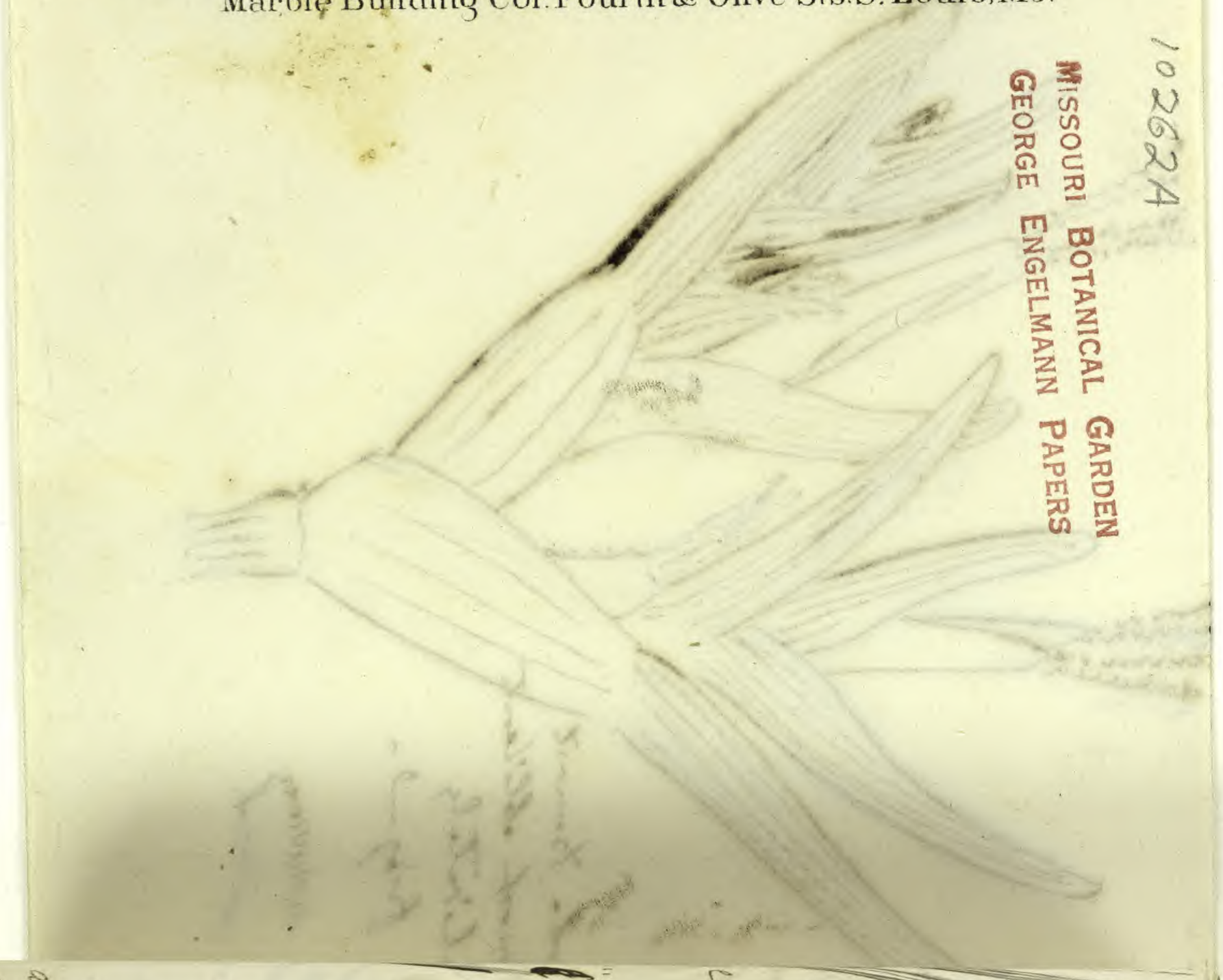
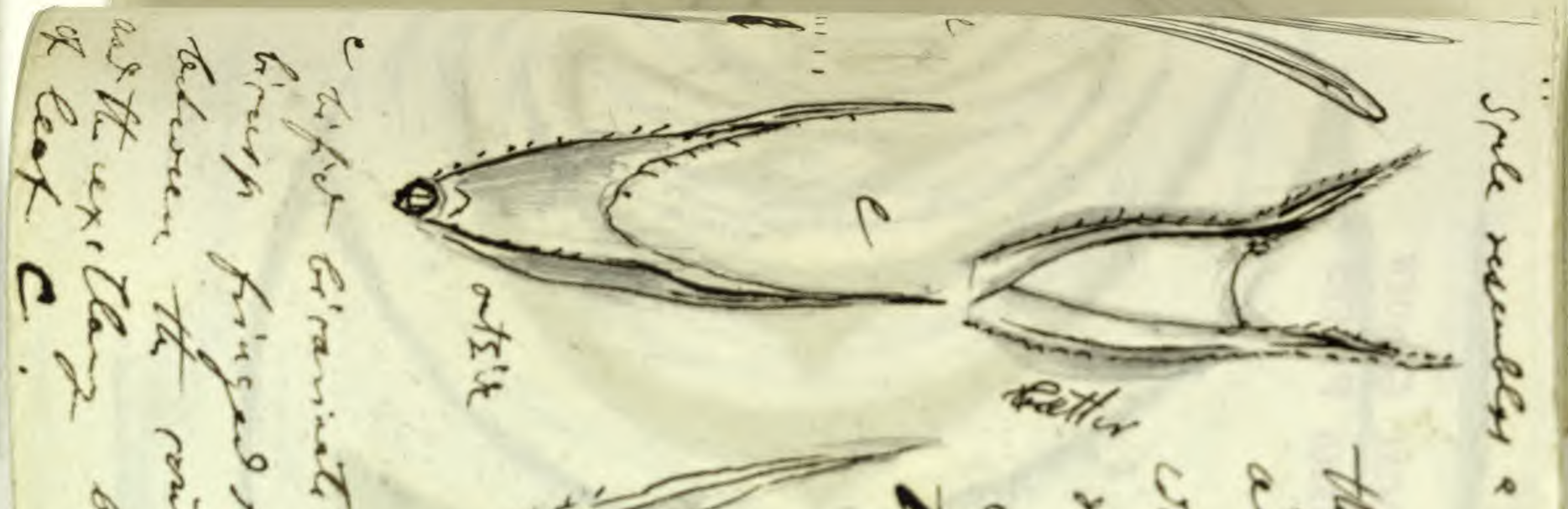
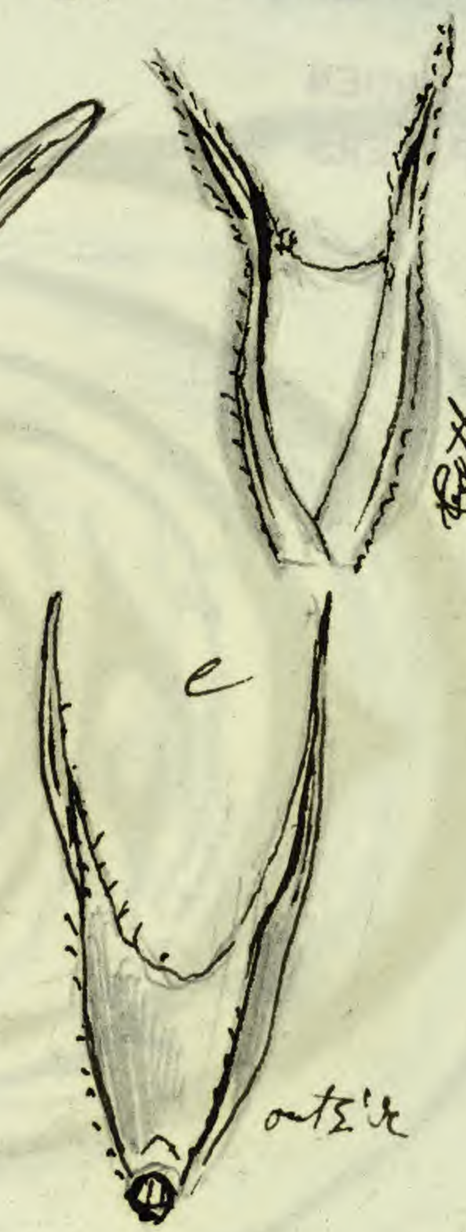


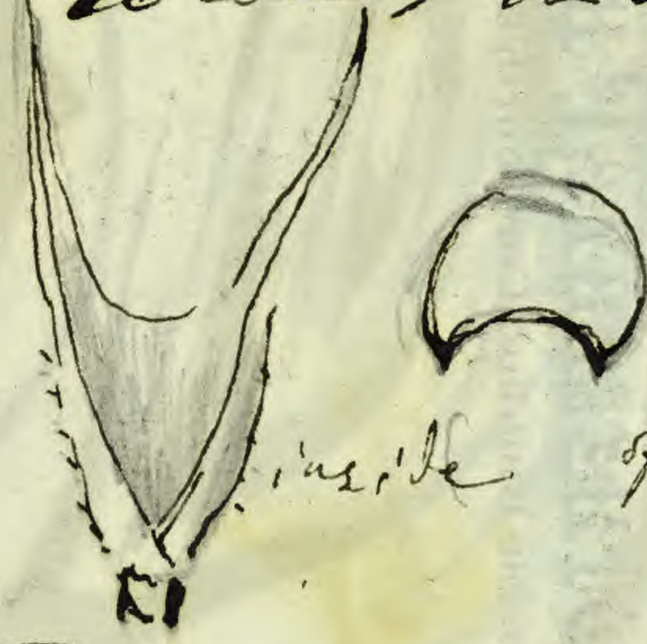


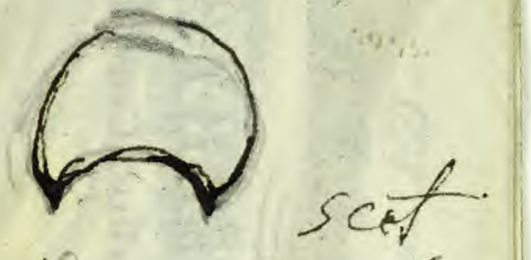
Scale resembles a Copper penny ♀

X see below

this bicuspid scale adheres to the branch when bracts are removed; the carinae are turned towards the stem b







c bifid bicarinate bicuspid fringed scale between the continuation of stem a and the exciting branch d in the axil of leaf c.

X

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9

abbreviation correct.
by upper palea of upper
floret doubtful

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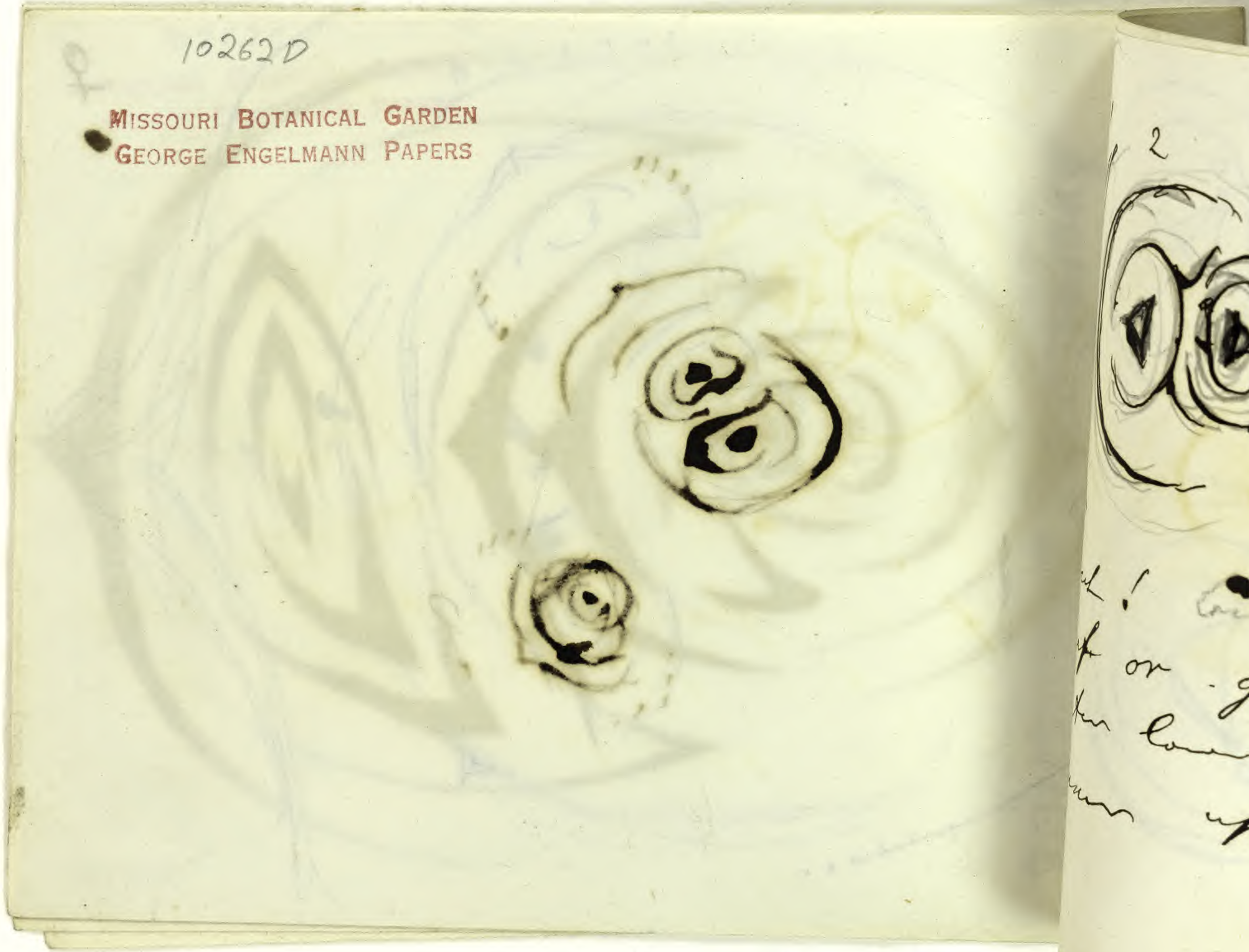

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Correct! but very unusual

1. keel or glume, no hyaline scale
2 outer lower floret
3. inner upper floret

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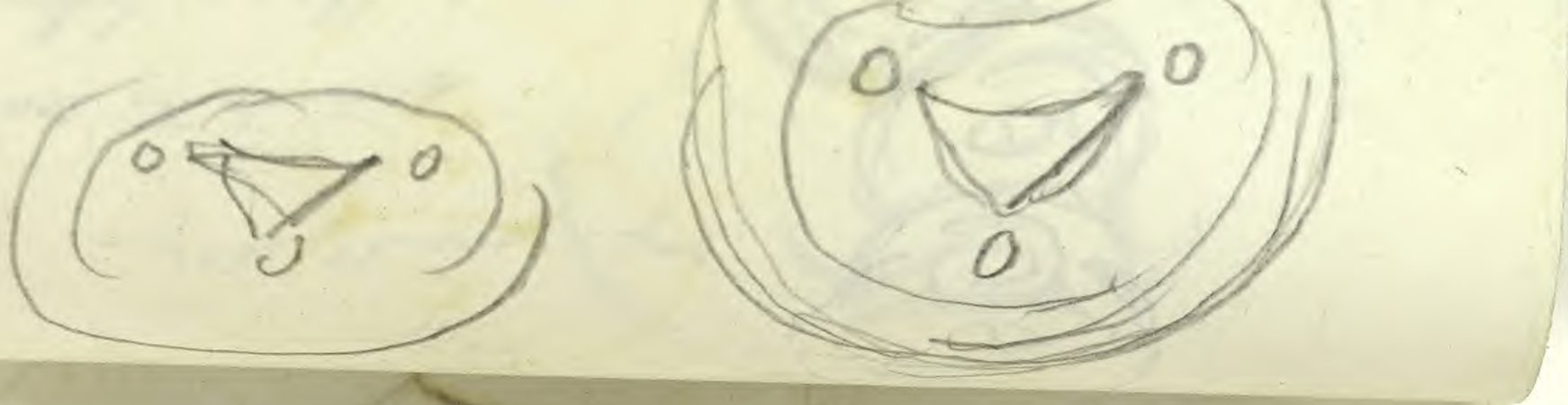

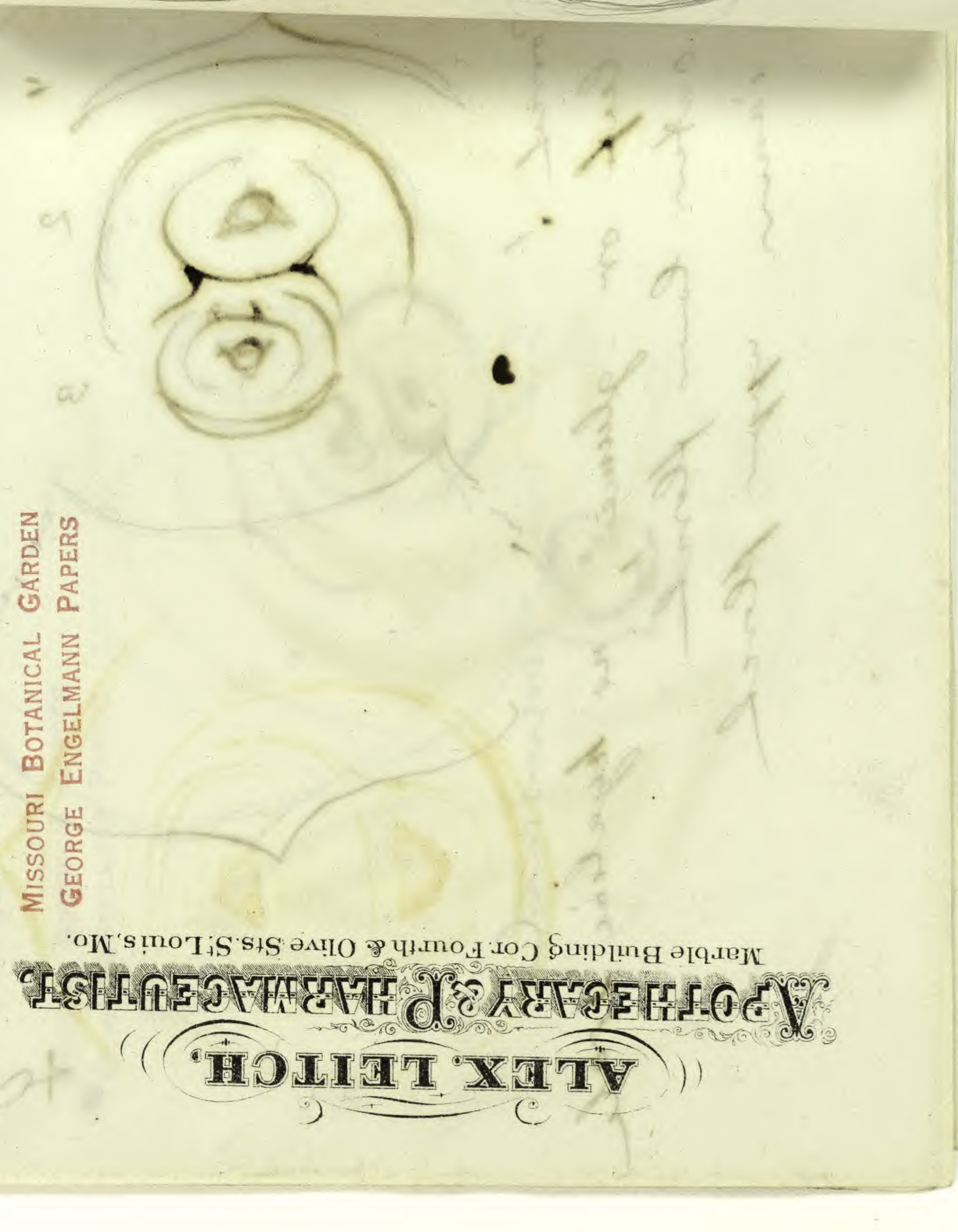

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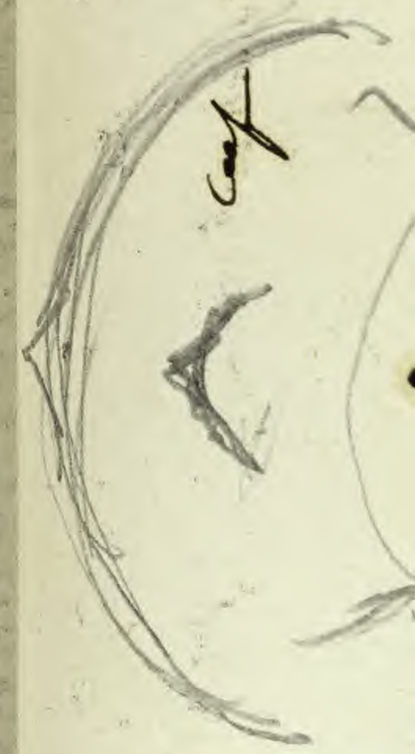

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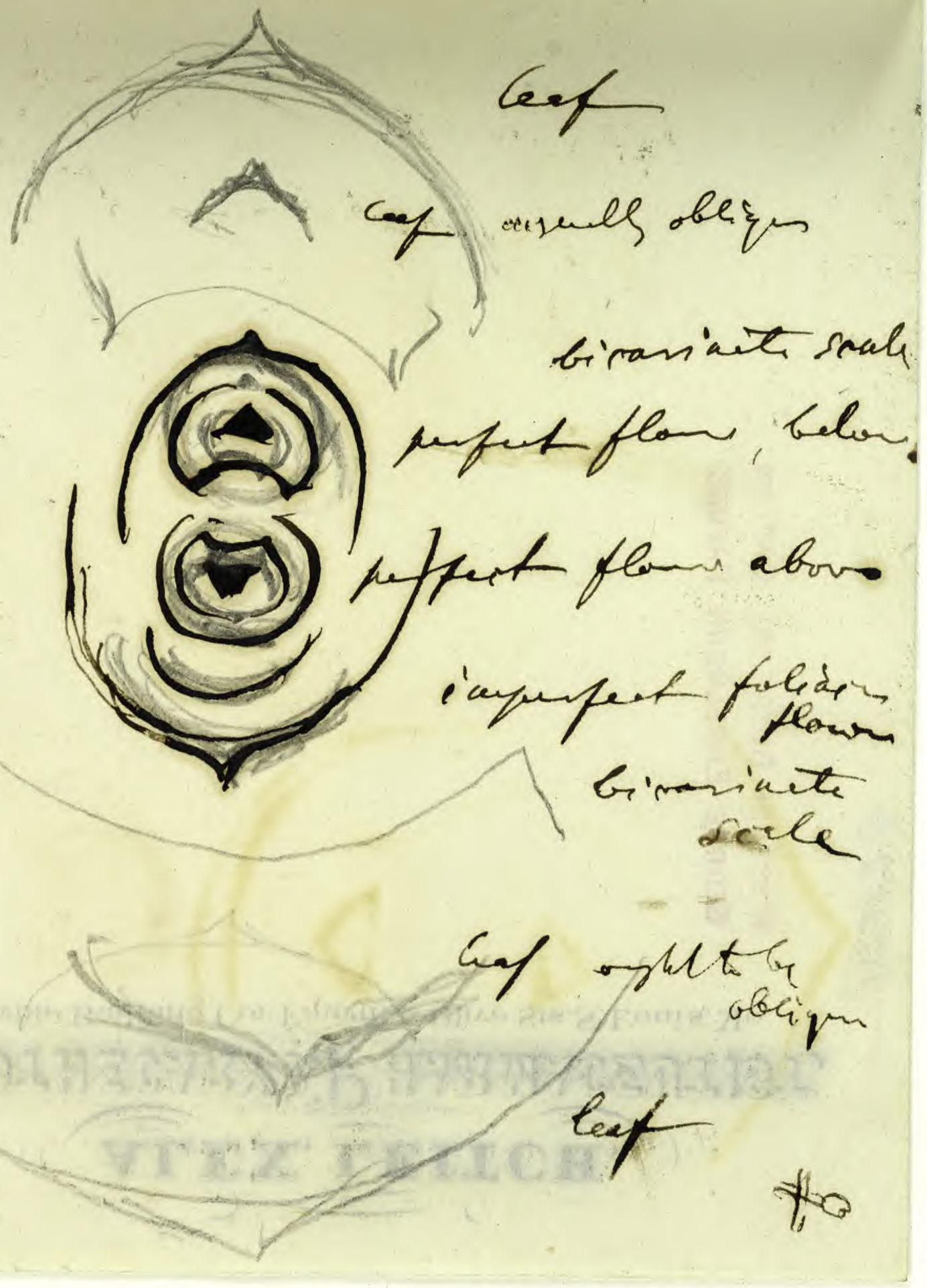

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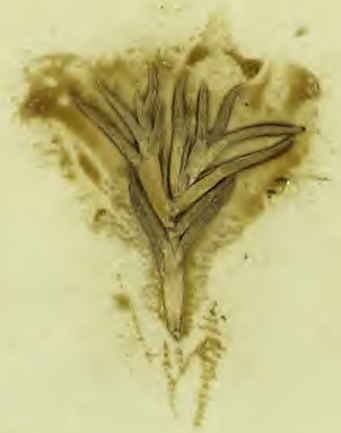

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Bowlesdom
Oldham Co Ky
July 1860

branches of styles & stigmas
simple hairs
papillose, obtuse.

styles deflexed,
laterally protruding
from flower
both sides of

one hair of pistil

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Bouteloua oligostachya Torr

Pl 9 1860

from living specimen

Pistil

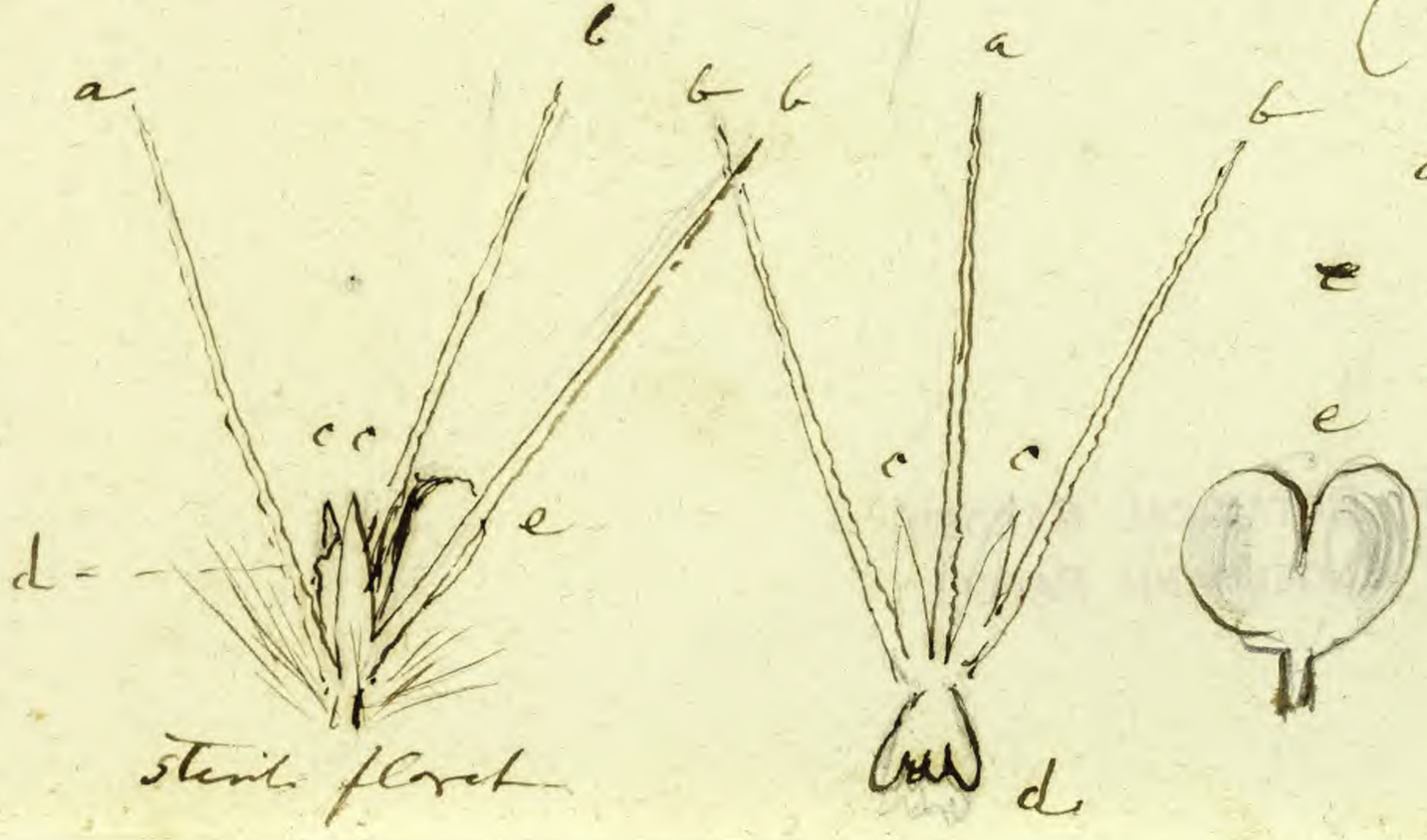
a b c d e: so called sterile floret

a b c d lower, awned sterile floret

lower palea
- a central awn
- b lateral awns
- c lateral membranous lobes

d upper 4 lobed palea

e second sterile floret, stipitate consisting of a rounded deeply 4 lobed outer palea



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Buchloe dactyloides

Dy 12 1860

pistil of Buffalograss

living

upper stigmatose part

of style purple

spreading & flexuous

where it rows out

of the top of the flower

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Morphology of

the Juncaceae

Flower

Doell. 1867

See pamphlet

in Doell's Bearbeitung

Flora

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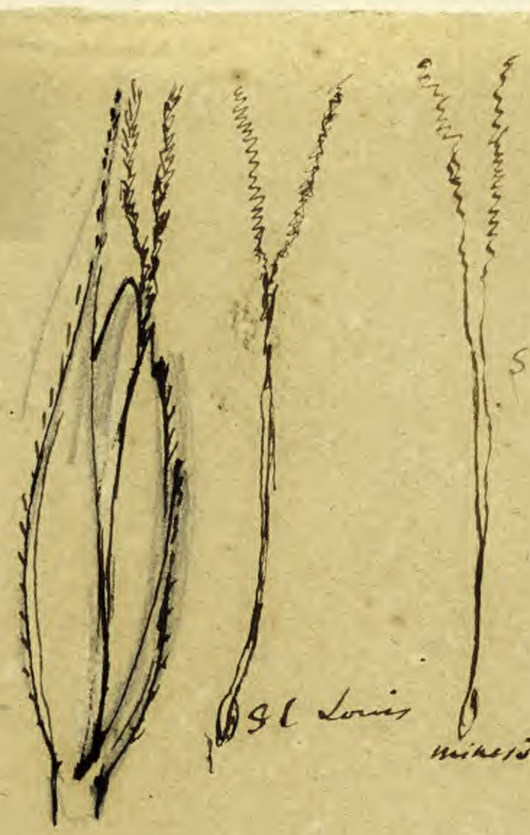
Spartina

1.



St Louis

Spikes 10–12 short pedicelled

style cleft abt 1/4 or 1/3

St Louis

Sp. cynosuroides

Sp. cynosuroides Willd. also A. Gray
and Kunth!

Minnesota

N.B. Specimens collected by Geyer & Dr Sayles in the Nebraska Territ have the styles united only 1/4 their length — in all other respects the same.

2.

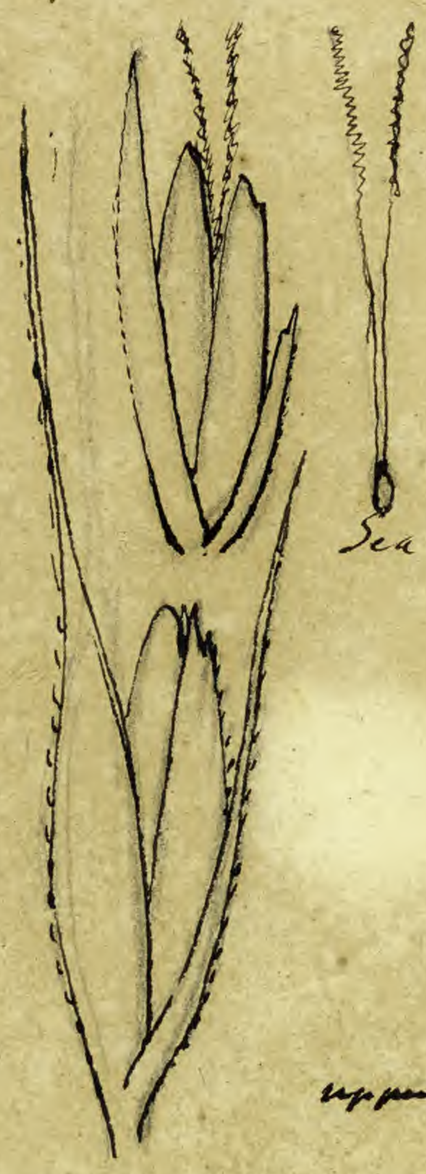
Spikes 15–20 sessile appressed

style cleft about 1/4 or even less

Seacoast, Texas
Lindheimer

Sp. ~~glabra Nuttal~~ juncoiformis Engel & Gray

3.



Spike 2–4 ~~long pedunculed~~ nearly sessile

Styles 2

Seacoast New York

Spartina juncea

4.

Spikes 12–20. pedicells 1/2–1 inch long.
on the whole very similar to No 1.

upper Arkansas River,
Fremont

Spartina cynosuroides Willd
2.

Spartina glabra Muhl.

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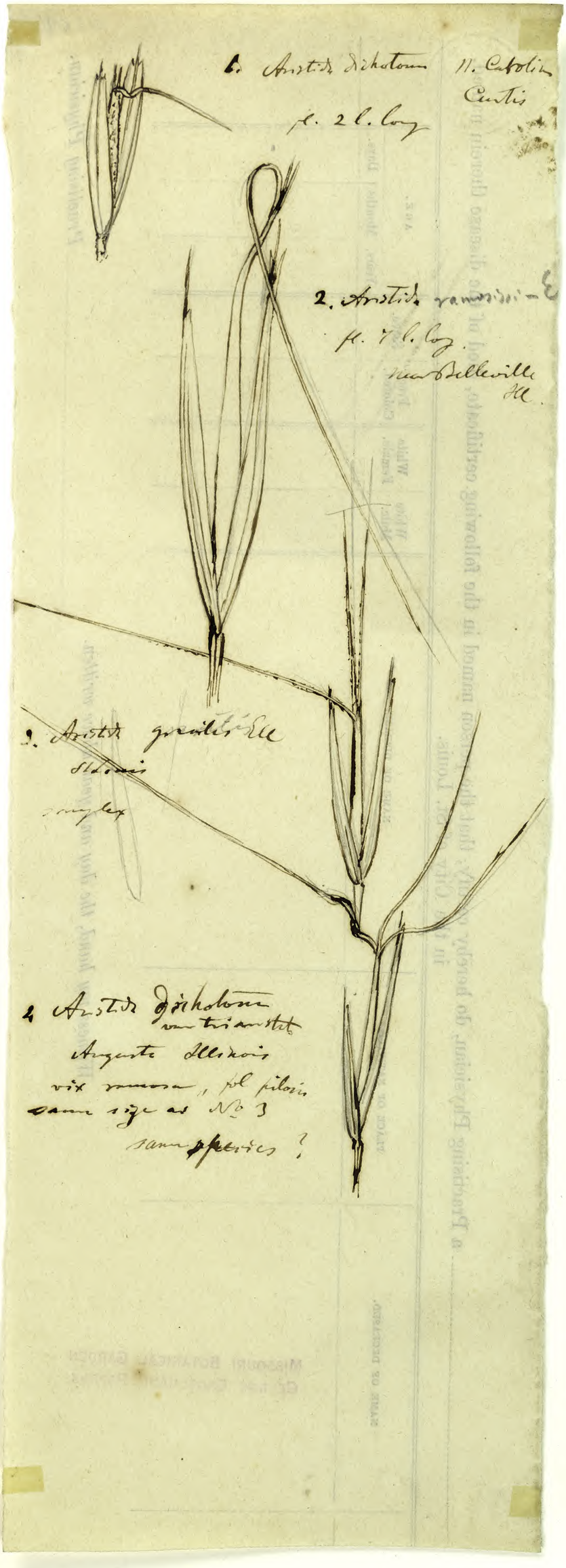

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..... a Practising Physician, do hereby certify, that the person named in the following certificate, died of the disease therein named, in the City of St. Louis.

	NAME OF DECEASED.	PLACE OF NATIVITY.	NAME OF DISEASE.	White Male.	White Female.	Free Colored.	Slave.	AGE. Years.	Months.	Days.

Witness my hand, the day and year above written.

..... *Practising Physician.*

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Acc 19-61

Buchloë nov. gen.

flores dioici, monoici, heteromorphi, masculi femineique heteromorphi

Planta masculi spicularis, spicis unilateralibus, distichae

(2-3 flore, Glumae duae inferior multo minor, Palea duae, inferior trinervis) v. glumas aequilongae

exredentes, mucronulatae, superior binervis

mutica, Squamulae duae, triangulares, enarginatae.

vix dimidiatae, tria vincta, ovarium lentiformi-latere, bivittatum

stipitatum, Stamina tria antheris lineari-bus, ovarii

rudimentum nullum.

Planta foeminea: spicula in capitulum 1-3 paucae (1-3) collecta

in caulis apice confertim, spicas brevis, capitulis

formes obliquas 1-3 plerumque binas vaginis foliorum

superiorum dilatatis involucratas, congestae

plerumque 2-3 fidas Glumae duae, inferior minima, tabescentes, squamiformes, involuti, superiores 3 fidae, refringentes, ultimae

glumae inferior 2-3-nervis, ovatae hirtae 2-3 fidae

latere inferiori cum glumis superiore connatae, glumae

reliquorum spiculorum inferiores, multo majores, libere ovato lanceolatae

membranaceae, hirtae, acutae, s. mucronatae, aequales, quae

capitulum externae, glumae superiores, oblongae

extroversae (involucrum cartilagineum, obscure simulans

basi connatae) dorsum incrassata, lignosum, quasi disseptum

enervia pallidae, apice hyalino, 3 fidae, laciniis subaequalibus, lateralibus

herbaceis, divaricatis, coronatae; l

Palea inferior (quoad capitulum externa) brevior

3 nervis, herbacea tri-fida, Palea superior

brevior 2 nervis, bi-Squamulae ut in floribus

masculis, Stamina nec rudimenta tria vincta,

Ovarium lenticulare, brevissime stipitatum, stylis

duobus erectis, stigmatibus multo longioribus ex

pilis simplicibus plumosa v. ex apice floris longe exserta

papillosis, in capitulo ovoideo, laterales, dorso

convexa, ubi carinatae, intus (versus paleam exteriorem) plana,

Buchloë dactyloides

Gramen planitiem arid arum Americae septentrionalis, ~~mexicanum~~ ~~septentrionalis~~ ~~occidentalem~~ ~~Texas~~ perenne stolonifera, ~~culmis~~ humile, ~~digitatum~~ pilis sparse pilosis ~~spathas~~ ~~expansum~~ vel ~~dilatat~~ glabris prelum; ligulis barbatis.

Buchloë nomen vulgare ~~Buffalo-grass~~ Buffalograss graece

Syn. gen. pl. mexic.

Buchloë dactyloides.

Nuttall Gen. I. p. 64 (Sesleria? dactyloides Tonry Torrey & Gray Gen. N. Amer. Pl. II. p. 153. pl. X. Torrey & Wheeler Rep. Surv. W. 100th Mer. Vol. VI. p. 157. Calamagrostis dactyloides Kunth in Hooker Journ. Bot. I. p. 111. Icon. Tex. II. 359. Also roll. by Lehm. Tex. Wright. 1849 785, 1857-62. 2079 Plantae Fendlerianae p. 28 nro 250.

Lasiostegia humilis Rupprecht (ined?) in Bunge, Reliq. Lehm. p. 347. — Gray Pl. Wright. in Mex. Bound. Surv. Bot. 2. p. 190. Hitchc. Tex. exs. 569. Fendler 940 Hartw. N. 250 Fide Gray. Sleeria Gray. Gleeraceae

Antephora axillaris Nutt. Gen. I. p. 111. Gray Pl. Fendl. Mex. Bound. Surv. Bot. 2. p. 190. Hitchc. Tex. exs. 569. Fendler 940 Hartw. N. 250 Fide Gray. Gleeraceae

This remarkable plant is found in the western prairies from the British possessions throughout the Western territories Nebraska Kansas & New Mexico down to Texas & Northern Mexico (well known to hunters and trappers) under the name of Buffalo grass (as one of the most nutritious grasses on which the cattle of the hunters & the Buffalo ~~and~~ ~~grant~~ for a part of the year ~~subsists~~ and fatten it) since the times of Nuttall it has been collected by almost every botanist traversing those regions, but the identity of the male plant however much more frequently than the female one. He who was not described until Nuttall took it up in 1855, while Nuttall published the

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MISSOURI BOTANICAL GARDEN

Though Prof Torrey as early 1848 & Emory reported it as far
west as early as 1818. The relation of both these
species has not even suspected, till among a collection
sent by Capt Bolton, Henry Engelmann, who
as Geologist accompanies the geological to prepare
corps attached to the Army of Utah, I found both
together and was struck with their resemblance; they
remarked, much doubted at first by botanists, became
a certainty when I drew out among the staminate
male plants a few fertile ones bearing
Kearny on the Platte River a noteworthy specimen
showing both male and female flowers on
the same rhizome (see plate XII).

The Grass forms tufts, and sends out stolons, which
are rather coarse, only a few inches long, or
of 1/2 - 2 inches in length, and terminate
each species from a Bromelia type with
stolons 1 - 2 feet long the internodes of the
measuring over 3 inches, the male plants
propagated principally by runners and may the
as we see it in the subdivisions have been
which need a rest for the much greater abundance
of the males. The leaves are 2 - 4 inches by 1/2 - 1 line wide, usually hairy on
the sheath, the blade glabrous; the sheath
The flowering stems of the male plant are 4 - 6 or
even 8 inches high (generally longer than the leaves), and bear 2 or 3 oblique
one sided spikes. These spikes are 3 - 6 lines
long and bear 10 - 15 spikelets alternate
in two rows, the uppermost one is often abortive and represented by a bristle
are as usual dunkey the chlorideae grasses
somewhat obliquely distorted; the oblique glumes
are broad on the
and are
covers the upper edge of flower, leaving their
lower edge free. The lower glume is as
long as the smaller in all these tribe of grass

10270

~~a~~ aside of the spike, & the larger ~~one~~ ~~upper~~ outside & much more conspicuous. —

The lower glume is one nerved, obtuse or acutish (contracted rarely acute) concolorate, or ~~purplish~~ with a ~~narrow~~ scarious margin & as long as the other & bearded equal to the upper ~~one~~ lateral lobed obtuse

Upper glume twice as long, much narrower, acute with ~~stiff~~ cilia near the ~~base~~, which ~~scarcely~~ ~~seems~~ is a short awn, & is a spine from Fort Kearny ~~or~~ ~~I find~~ on the ~~upper~~ lower side ~~with~~ a scarcely nerve running out into a ~~short~~ ~~point~~, lateral tooth, on the upper side ~~the~~ there is very distinct the ~~skeleton~~ skeletons of the scarious plate, shows the ordinary structure

Spikelets with 2 or rarely 3 flowers, lower one subsessile, upper ones pedicelled, lower paleæ ~~3 nerved~~ convex, obscurely 3 nerved, middle nerve in the lower flowers running out into a mucron or very short awn, & the upper one mostly even with the membranous margin.

Upper paleæ 2 nerved 2 carinate, ~~partly enveloping~~ as long as the lower one, which partly envelopes ~~by the~~ obscurely scarious at the ~~base~~ & inside of the lower paleæ ~~at the~~ two paleæ at the base triangular truncate, ~~with~~ not exceeding the paleæ, auriculate or ~~sagittate~~ 3 clawed, ~~partly~~ Bagnold the paleæ, auriculate deeply colored at both ends ~~longer than~~ & half as long as the flowers; pollen grains (of the dry anther - immersed in water) globular, 0.017 line in diameter

No trace of an ovary observed in the ~~flowers~~ ~~lower~~ one of these 2 leaves of ~~flowers~~ bears in its axil a branch bearing ~~flowers~~ or flowering ~~twig~~, the upper leaf never bears a ~~flowers~~ branch, the upper kind of flowers may be considered as ~~female~~ such

The female stalk of the female plant is much shorter than the leaves, usually 1½–2 inches high (very rarely 3–4), it is leafy to the top and the 2 (or 3) upper leaves have broad ventricose sheaths which serve as involucres to the flower heads. These heads are usually 2 in number one almost sessile below the 2 upper ~~ones~~ top leaves and on the side of it the lower one, the other on a flattened pedicelle on the side of the upper leaf; sometimes a third still higher on the stem on the opposite side is observed. The pedicelles of these heads are nothing but the common pedicle or

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GEORGE ENGELMANN

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